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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/667,718	09/22/2000	Hyun Chang Lee	8733.270	9395

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EXAMINER

ALPHONSE, FRITZ

ART UNIT	PAPER NUMBER
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2675

DATE MAILED: 05/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/667,718

Applicant(s)
Lee et al.

Examiner
Fritz Alphonse

Art Unit
2675



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Sep 22, 2000
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3-4 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Nomura (U.S. Pat. No. 6,236,385).

Regarding claim 1, Nomura (fig. 5) shows a method of driving a liquid crystal display device (11) having a plurality of liquid crystal cells disposed in a matrix of rows and columns, the method comprising: scanning the rows of liquid crystal cells in the liquid crystal display device sequentially (col. 13, lines 47-61); and, resetting each liquid crystal cell of the liquid crystal display device simultaneously (col. 28, lines 54-67).

As to claim 3, Nomura discloses a method, wherein resetting each liquid crystal cell of the liquid crystal display device simultaneously comprises applying a reset voltage to a gate electrode line of each liquid crystal cell (fig. 20; col. 10, lines 25-44).

As to claim 4, Nomura (fig. 5) shows a method of resetting a liquid crystal display device, wherein a reset voltage is applied to all liquid crystal cells of the liquid crystal display device to reset the liquid crystal display device (col. 3, lines 16-22).

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As to claim 15, the claim has substantially the limitations of claims 1 and 2-3. Therefore, it is analyzed as previously discussed in claims 1 and 2-3 above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nomura.

Regarding claim 12, Nomura (figs. 38) teaches about a reset circuit for a liquid crystal display device, comprising: a shift register (111) for generating sequential gate driving signals; logical OR gates (64) for performing a logical OR operation of an input reset signal and each gate driving signal from the shift register; and level shifters (114).

Nomura does not teach level shift register connected individually to outputs of the logical OR gates.

However, this is very obvious. It would have been obvious to one of ordinary skill in the art at the time the invention was made to connect the level shift register individually to the outputs of the logical OR gates.. The motivation would have been a desire to obtain a display system with high quality image and with less unevenness.

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As to claims 13-14, the claims have substantially the limitations of claim 12. Therefore, they are analyzed as previously discussed in claim 12 above.

5. Claims 2, 5-11 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nomura (U.S. Pat. No. 6,236,385) in view of Oda (U.S. Pat. No. 5,841,410).

As to claim 2, Nomura does not teach a method that applies a reset voltage to a common electrode of the liquid crystal display device. However, that limitation is disclosed by Oda (col. 22, lines 11-28).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Nomura by specifically providing an LCD which applies a reset voltage to a common electrode), as disclosed by Oda. Doing so would reduce crosstalk in the LCD, to thereby improve the display quality of the LCD.

As to claim 5, the claim has the limitations of claim 2. Therefore, it is analyzed as previously discussed in claim 2 above.

As to claims 6-8, Nomura does not teach a method wherein the reset voltage applied to the common electrode is less than a common voltage applied to the common electrode in a data charging interval. However, these limitations are disclosed by Oda (figs. 31-33; col. 2, lines 53-65). See the motivation above.

Regarding claim 9, Nomura teaches about a reset circuit for a liquid crystal display device (see abstract), including selection voltage (see figure 2) for selecting voltage to be applied to the

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electrodes of the liquid crystal display device (col. 12, lines 45-65). Nomura teaches about a reset voltage to be applied to the electrode in a reset interval (col. 6, lines 8-25).

Nomura does not teach a normal common voltage to be applied to a common electrode of the LCD. However, this limitation is disclosed by Oda (col. 2, lines 53-65). See the motivation above.

As to claim 10, the claim differs from claim 9 only in that the limitation "voltage amplifier" is added. However, this limitation is disclosed Oda (fig. 36; col. 16, lines 9-20). As to claim 11, the claim has substantially the limitations of claim 9. Therefore, it is analyzed as previously discussed in claim 9 above.

As to claims 16-17, the claims have substantially the limitations of claim 2. Therefore, it is analyzed as previously discussed in claim 2 above.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Nomura et al. (U.S. Pat. No. 5,835,075) discloses a method of driving a liquid crystal display device.

Oda et al. (U.S. Pat. No. 6,222,516) discloses a method of driving an active matrix liquid crystal display.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fritz Alphonse whose telephone number is (703) 308-8534.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Saras, can be reached at (703) 305-9720.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



F. Alphonse

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May 2, 2002


CHANH NGUYEN
PRIMARY EXAMINER